CA SUBSCRIBER PRICE 0.00 -11.72

=> d his

(FILE 'HOME' ENTERED AT 13:10:23 ON 07 JUL 2003)

FILE 'CAPLUS' ENTERED AT 13:10:30 ON 07 JUL 2003

```
L1          54 AROTINOIDS
L2          40 RETINOBENZOIC
L3           0 L1 AND L2
L4       62851 PHENAN?
L5           0 L1 AND L4
L6       30539 TRICYC?
L7           0 L1 AND L6
L8         298 ?AROTINOIDS
L9         209 CAROTINOIDS
L10         89 L8 NOT L9
L11         35 L10 NOT L1
L12     475881 BENZO?
L13         15 L11 AND L12
L14          0 BENZOAROTINOID?
```

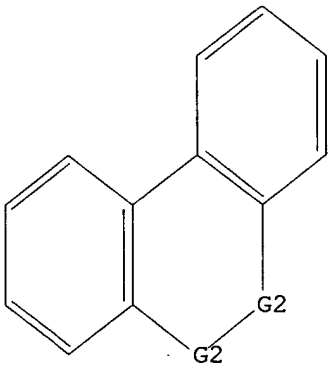
FILE 'REGISTRY' ENTERED AT 13:44:49 ON 07 JUL 2003

```
L15            STRUCTURE UPLOADED
L16          0 SEARCH L15 SSS SAM
L17          0 SEARCH L15 SSS FULL
L18            STRUCTURE UPLOADED
L19          0 SEARCH L18 SSS SAM
L20          0 SEARCH L18 SSS FULL
```

=>
Uploading 10075845 phenanthrene core.str

L21 STRUCTURE UPLOADED

=> d l21
L21 HAS NO ANSWERS
L21 STR



G1 C,O,S,N

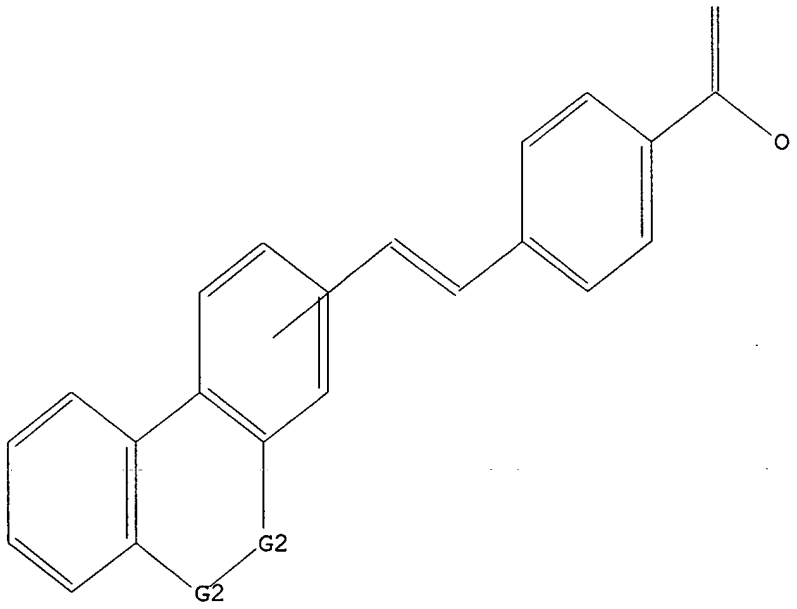
G2 C,O,S

G3 H

Structure attributes must be viewed using STN Express query preparation.

=> search l21 sss sam
SAMPLE SEARCH INITIATED 13:53:21 FILE 'REGISTRY'

```
SAMPLE SCREEN SEARCH COMPLETED -  68314 TO ITERATE

  1.5% PROCESSED    1000 ITERATIONS                          32 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **INCOMPLETE**
                        BATCH   **INCOMPLETE**
PROJECTED ITERATIONS:      EXCEEDS 1000000
PROJECTED ANSWERS:         EXCEEDS   40916

L22          32 SEA SSS SAM L21

=>
Uploading 10075845 phenanthrene core.str

L23     STRUCTURE UPLOADED

=> d l23 sss sam
L23 HAS NO ANSWERS
'SSS SAM ' IS NOT A VALID STRUCTURE FORMAT KEYWORD
Structure Formats
SIA ----- Structure Image, Attributes, and map table if it contains
          data.  (Default)
SIM ----- Structure IMage.
SAT ----- Structure ATtributes and map table if it contains data.
SCT ----- Structure Connection Table and map table if it contains
          data.
SDA ----- All Structure DAta (image, attributes, connection table and
          map table if it contains data).
NOS ----- NO Structure data.
ENTER STRUCTURE FORMAT (SIM), NOS:end

=> d l23
L23 HAS NO ANSWERS
L23             STR
```




```
G1 C,O,S,N
G2 C,O,S
G3 H
```

Structure attributes must be viewed using STN Express query preparation.

=> search l23 sss sam
SAMPLE SEARCH INITIATED 13:56:42 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 562 TO ITERATE

100.0% PROCESSED 562 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 9818 TO 12662
PROJECTED ANSWERS: 0 TO 0

L24 0 SEA SSS SAM L23

=> search l23 sss full
FULL SEARCH INITIATED 13:56:52 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 11707 TO ITERATE

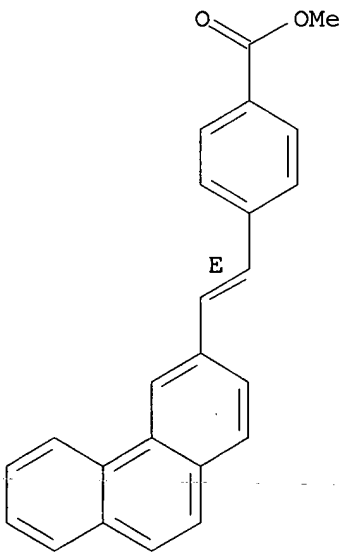
100.0% PROCESSED 11707 ITERATIONS 3 ANSWERS
SEARCH TIME: 00.00.01

L25 3 SEA SSS FUL L23

=> d scan

L25 3 ANSWERS REGISTRY COPYRIGHT 2003 ACS
IN Benzoic acid, 4-[2-(3-phenanthrenyl)ethenyl]-, methyl ester, (E)- (9CI)
MF C24 H18 O2

Double bond geometry as shown.

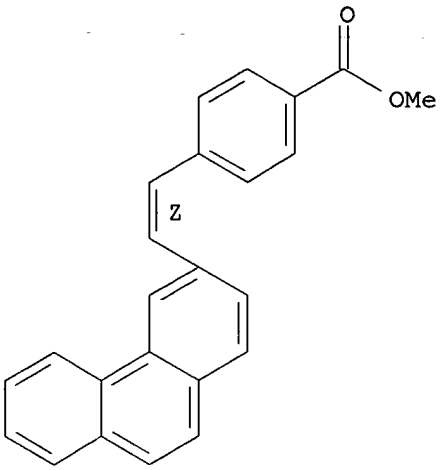


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):3

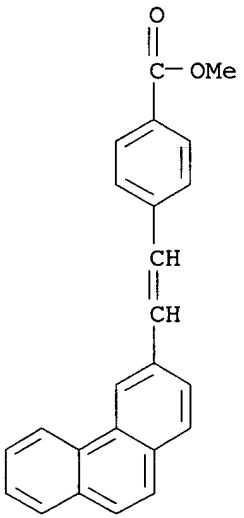
L25 3 ANSWERS REGISTRY COPYRIGHT 2003 ACS
IN Benzoic acid, 4-[2-(3-phenanthrenyl)ethenyl]-, methyl ester, (Z)- (9CI)
MF C24 H18 O2

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L25 3 ANSWERS REGISTRY COPYRIGHT 2003 ACS
IN Benzoic acid, 4-[2-(3-phenanthrenyl)ethenyl]-, methyl ester (9CI)
MF C24 H18 O2



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> file caplus
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION

FULL ESTIMATED COST 451.25 529.13

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) SINCE FILE ENTRY TOTAL SESSION

CA SUBSCRIBER PRICE 0.00 -11.72

FILE 'CAPLUS' ENTERED AT 13:57:39 ON 07 JUL 2003
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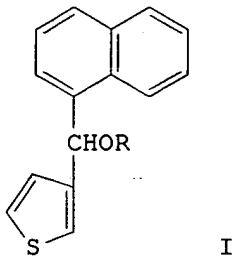
FILE COVERS 1907 - 7 Jul 2003 VOL 139 ISS 2
FILE LAST UPDATED: 6 Jul 2003 (20030706/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

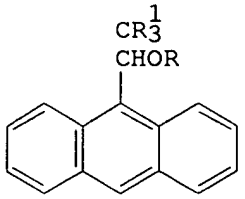
=> l25
L26 3 L25

=> d l26 1-3 ti fbib abs it

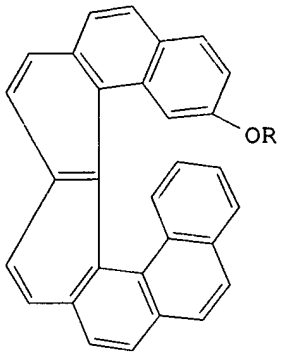
L26 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2003 ACS
TI Diastereoselective sodium borohydride reductions of (dl)-.alpha.-keto esters
AN 1986:552672 CAPLUS
DN 105:152672
TI Diastereoselective sodium borohydride reductions of (dl)-.alpha.-keto esters
AU Ben Hassine, B.; Gorsane, M.; Pecher, J.; Martin, R. H.
CS Lab. Synth. Org. Photochim., Fac. Sci. Tech., Monastir, 5000, Tunisia
SO Bulletin des Societes Chimiques Belges (1985), 94(8), 597-603
CODEN: BSCBAG; ISSN: 0037-9646
DT Journal
LA English
OS CASREACT 105:152672
GI



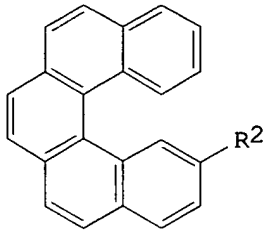
I



II



III



IV

AB The (.+-.)-alcs. of naphthalene I (R = H), anthracenes II (R = H, R1 = Cl, Br, F), and heptahelicene III (R = H) were esterified with PhCOCOCl to give the (.+-.)-esters I-III (R = COCOPh), which were reduced with NaBH4 in 99:1 THF-MeOH to give 80-99% (.+-.)-esters I-III (R = COCHPhOH) with 54 to .apprx.100% diastereomeric excesses. III (R = H) was prepd. from pentahelicene IV (R2 = CO2Me) by redn. and oxidn. to IV (R2 = CHO), coupling with 4-MeOC6H4CH2P+Ph3 Br-, cyclization to III (R = Me), and demethylation.

IT Stereochemistry
(of redn., of .alpha.-keto esters by sodium borohydride)

IT Esters, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxo, stereoselective hydride redn. of)

IT Reduction
(stereoselective, of .alpha.-keto esters by sodium borohydride)

IT 98-03-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(Grignard reaction of, with bromonaphthalene)

IT 90-11-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(Grignard reaction of, with thiophenecarboxaldehyde)

IT 104-93-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(bromination of)

IT 100-52-7, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with tolylmethylphosphonium salt)

IT 25726-04-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(esterification by, of .alpha.-keto esters)

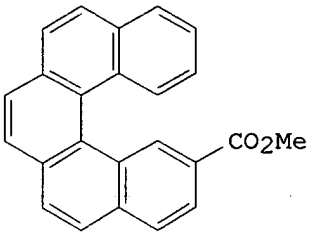
IT 65487-67-4 99373-08-7 99373-09-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(esterification of, by phenylglyoxyloyl chloride)

IT 2378-86-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and condensation of, with benzaldehyde)

IT 33895-27-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and condensation of, with formylbenzoate)
IT 104449-72-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and condensation of, with methoxyphenylmethylphosphonium salt)
IT 1530-38-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and condensation of, with pentahelicenecarboxaldehyde)
IT 1571-08-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and condensation of, with phenanthrylmethylphosphonium salt)
IT 2746-25-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and condensation of, with triphenylphosphine)
IT 1860-17-9P **104449-71-0P** 104449-73-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and cyclization of)
IT 98481-07-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and demethylation of)
IT 104449-56-1P 147022-27-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and esterification of, by phenylglyoxyloyl chloride)
IT 104449-75-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and oxidn. of)
IT 92089-83-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and redn. of)
IT 104449-57-2P 104449-58-3P 104449-59-4P 104449-60-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and redn. of, stereochem. of)
IT 1657-45-0P **38082-27-8P** 104449-61-8P 104449-62-9P
104449-63-0P 104449-64-1P 104449-65-2P 104449-66-3P 104449-67-4P
104449-68-5P 104449-69-6P 104449-70-9P 104449-76-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
IT 832-71-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn., bromination, and reaction of, with triphenylphosphine)
IT 104-81-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with triphenylphosphine)

L26 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2003 ACS
TI Photochemical organic synthesis using sunlight: a diarylethylene to helicene photocyclization in Monastir (Tunisia)
AN 1984:551155 CAPLUS
DN 101:151155
TI Photochemical organic synthesis using sunlight: a diarylethylene to helicene photocyclization in Monastir (Tunisia)
AU M'Henni, A.; Ben Hassine, B.; Gorsane, M.
CS Lab. Synth. Org. Photochim., Fac. Sci. Tech. Monastir, Monastir, Tunisia
SO Journal de la Societe Chimique de Tunisie (1984), 11, 51-2
CODEN: JSCTDP; ISSN: 0253-1208

DT Journal
LA English
OS CASREACT 101:151155
GI



I

AB Sunlight was used for the photocyclization of 1-(4-methoxycarbonylphenyl)-2-(3-phenanthryl)ethylene to give the pentahelicene I.
IT Ring closure and formation
(photochem., of diarylethylene to pentahelicene deriv. using sunlight)
IT **92089-82-2**
RL: RCT (Reactant); RACT (Reactant or reagent)
(photocyclization of, using sunlight)
IT 92089-83-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, by photocyclization of diarylethylene using sunlight)

L26 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2003 ACS
TI Helicene series. XVII. NMR evidence of helicene-like conformations in the cis-1,2-diarylethylenes
AN 1972:539014 CAPLUS
DN 77:139014
TI Helicene series. XVII. NMR evidence of helicene-like conformations in the cis-1,2-diarylethylenes
AU Martin, R. H.; Defay, Nicole; Figeys, H. P.; Le Van, K.; Ruelle, J. J.; Schurter, J. J.
CS Fac. Sci., Univ. Libre Bruxelles, Brussels, Belg.
SO Helvetica Chimica Acta (1972), 55(6), 2241-4
CODEN: HCACAV; ISSN: 0018-019X
DT Journal
LA English
AB The cis and trans isomers of 1,2-diarylethylene, precursors of helicenes, were examd. by NMR. The obsd. differences in chem. shifts, specific solvent effects, and steric effects were explained by the contribution of helicene-like conformers in the cis isomers.
IT Conformation and Conformers
(helicene-like, of diarylethylenes, NMR in relation to)
IT 20508-11-6 35160-92-0 35160-93-1 35160-94-2 38082-23-4
38082-24-5 38082-25-6 38082-26-7 **38082-27-8** 38082-28-9
38082-29-0
RL: PRP (Properties)
(helicene-like conformation of, NMR in relation to)

=> logoff hold

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	10.66	539.79

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL

	ENTRY	SESSION
CA SUBSCRIBER PRICE	-1.95	-13.67

SESSION WILL BE HELD FOR 60 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 14:00:57 ON 07 JUL 2003

Connecting via Winsock to STN

Welcome to STN International! Enter x:
x
Welcome to STN International! Enter x:
LOGINID:SSSPTA1623PAZ

PASSWORD:
* * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'CAPLUS' AT 14:25:47 ON 07 JUL 2003
FILE 'CAPLUS' ENTERED AT 14:25:47 ON 07 JUL 2003
COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	10.66	539.79

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-1.95	-13.67

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	10.66	539.79

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-1.95	-13.67

FILE 'CAPLUS' ENTERED AT 14:25:57 ON 07 JUL 2003
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FILE COVERS 1907 - 7 Jul 2003 VOL 139 ISS 2
FILE LAST UPDATED: 6 Jul 2003 (20030706/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> save temp all retsrch/l
L# LIST L1-L26 HAS BEEN SAVED AS 'RETSRCH/L'

=> FIL STNGUIDE

	SINCE FILE ENTRY	TOTAL SESSION
COST IN U.S. DOLLARS	0.42	540.21
FULL ESTIMATED COST		
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	0.00	-13.67
CA SUBSCRIBER PRICE		

FILE 'STNGUIDE' ENTERED AT 14:26:26 ON 07 JUL 2003
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AND TECHNOLOGY CORPORATION, AND FACHINFORMATIONSZENTRUM KARLSRUHE

FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Jul 4, 2003 (20030704/UP).

=> DIS SAVED

NAME	CREATED	NOTES/TITLE
ALKYLATIN/L	13 DEC 2001	9 L-NUMBERS
ESTERODOR/L	05 SEP 2002	42 L-NUMBERS
INDIUMCL3/A	30 MAY 2001	1 ANSWER IN FILE REGISTRY
LTWENTAUGFOR/A	04 AUG 2001	72 ANSWERS IN FILE CAPLUS
NEOTAMECRYST/A	24 APR 2001	59 ANSWERS IN FILE CAPLUS
NVLARMFULGEN/A	19 APR 2001	196 ANSWERS IN FILE REGISTRY
POHBENZALDEH/A	10 JUL 2001	5519 ANSWERS IN FILE CAPLUS
PROSTACMPD15/A	01 AUG 2001	34 ANSWERS IN FILE CAPLUS
RETSRCH/L	TEMP	26 L-NUMBERS
STILLEAPP/L	07 JAN 2002	17 L-NUMBERS
TWOAMINOPOLY/Q	16 APR 2001	UPLOADED STRUCTURE

=> DIS SAVED/S
NO SAVED SDI REQUESTS

=> FIL CAPLUS

	SINCE FILE ENTRY	TOTAL SESSION
COST IN U.S. DOLLARS	0.06	540.27
FULL ESTIMATED COST		
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	0.00	-13.67
CA SUBSCRIBER PRICE		

FILE 'CAPLUS' ENTERED AT 14:26:53 ON 07 JUL 2003
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FILE COVERS 1907 - 7 Jul 2003 VOL 139 ISS 2
FILE LAST UPDATED: 6 Jul 2003 (20030706/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> logoff hold

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.42	540.69

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-13.67

SESSION WILL BE HELD FOR 60 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 14:26:59 ON 07 JUL 2003